

In the Claims

1 – 16. (Cancelled)

17. (Currently Amended) A device to monitor penetration of [[an]] a penetration instrument in an anatomical structure comprising:

at least two electrodes located on the penetration instrument, each of the at least two electrodes having a contact surface coinciding with the surface of the penetration instrument;
a source of current supplying the at least two electrodes; and
means for measuring impedance between the at least two electrodes, wherein the electrodes are located on the penetration instrument, wherein the first electrode has a contact surface coinciding with a distal surface of the penetration instrument and the second electrode has a contact surface coinciding with a lateral surface of the penetration instrument, and
wherein the contact surfaces of the at least two electrodes are dimensioned to have a coinciding and be constant contact surface as a function of a degree of penetration of the penetration instrument in the anatomical structure.

18. (Currently Amended) The device according to claim 17, wherein the two of the electrodes have the contact surfaces coinciding with the distal surface of the penetration instrument and the two electrodes are coaxially arranged and separated from each other by insulation.

19. (Currently Amended) The device according to claim 17, wherein the two of the electrodes have the contact surfaces coinciding with the distal surface of the penetration instrument and the two electrodes are symmetrical with respect to a longitudinal axis of the penetration instrument.

20. (Currently Amended) The device according to claim [[17]] 31, wherein the at least one electrode has one annular contact surface.

21. (Currently Amended) The device according to claim 17, comprising wherein one main of the electrode electrodes has the contact surface coinciding with a distal surface of the penetration instrument and a plurality of laterally coinciding at least two secondary of the electrodes have the contact surfaces laterally coinciding to form longitudinally spaced annular contacts.

22. (New) The device according to claim 17, comprising a wherein one first of the electrode electrodes has the contact surface coinciding with the distal surface of the penetration instrument, a one second of the electrode electrodes has a contact surface coinciding with the lateral surface of the penetration instrument, and the device further comprising a third electrode partially covering the lateral surface of the penetration instrument.

23. (Previously Presented) The device according to claim 17, further comprising means for signaling producing a signal during detection by the means to measure the impedance by a variation in impedance.

24. (Previously Presented) The device according to claim 23, wherein the signal produced is a sound signal whose frequency and/or rhythm decrease as a function of impedance measured.

25. (Previously Presented) The device according to claim 24, wherein the frequency and/or rhythm decrease in a non-linear manner as a function of the impedance measured.

26. (Currently Amended) The device according to claim 23, wherein the signal produced when the instrument leaves the a bone structure as the anatomical structure is an acute sound signal with a rapid rhythm.

27. (Currently Amended) The device according to claim 23, wherein the signal produced when the instrument penetrates the a bone structure as the anatomical structure is a low-pitched sound signal with a slow rhythm.

28. (Previously Presented) The device according to claim 17, which is an autonomous device.

29. (Previously Presented) The device according to claim 17, further comprising a central channel for passage of an additional instrument.

30. (New) The device according to claim 17, wherein at least one of the electrodes has the contact surface coinciding with the distal surface of the penetration instrument.

31. (New) The device according to claim 17, wherein at least one of the electrodes has the contact surface coinciding with the lateral surface of the penetration instrument.